REMARKS

Claims 1-16 are pending in the application. These claims were rejected as follows:

Claims / Section	35 U.S.C. Sec.	References / Notes
1-4, 7-13 & 16	§103(a) Obviousness	• Jakob, et al. (U.S. Patent No. 6,816,600); and • DuFaux (U.S. Patent No. 6,611,252).
5, 6, 14 & 15	§103(a) Obviousness	• Jakob, et al. (U.S. Patent No. 6,816,600); • DuFaux (U.S. Patent No. 6,611,252); and • Rafii, et al. (U.S. Patent No. 6,512,838).

Applicant has added new claims 17-20 to the application for consideration and has amended claims 4 and 13 respectively to depend from these new claims, but has otherwise provided discussion below for distinguishing the present invention from the art cited against it.

Applicant's use of reference characters below is for illustrative purposes only and is not intended to be limiting in nature unless explicitly indicated.

35 U.S.C. §103(a), CLAIMS 1-4, 7-13 & 16 OBVIOUSNESS OVER JAKOB IN VIEW OF DUFAUX

1. The Examiner has not established a prima facie case for obviousness with respect to claims 1 and 10: the fact that references can be combined is not sufficient to establish prima facie obviousness, pursuant to MPEP §2143.01(III).

In the OA, on p. 2, the Examiner indicated that claims 1-4, 7-13 and 16 are rejected under 35 U.S.C. §103(a) as being obvious in view of the

combination of Jakob and DuFaux. With regard to claim 1, the Examiner cited Jakob as disclosing:

> a device (1) to remotely operate a hearing device, comprising: an input device (13) configured to manually input control data (See Fig. 1 and col. 3, lines 40-46).

The Examiner noted that Jakob fails to teach the input device comprising: a projection device configured to project one or more virtual input elements; and a sensor device configured to register an operation of the virtual input elements.

The Examiner then applied DuFaux as teaching:

> a virtual data input device comprising an input device configured to manually input control data, the input device comprising: a projection device (20,40) configured to project one or more virtual input elements; and a sensor device (5 0,60) configured to register an operation of the virtual input elements for use in any form of communication or computing device (See Figs. I and 2 and col. 3, lines 32-44).

The Examiner then concluded that it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the virtual input device in the control of Jakob for convenient method to operate a miniaturized device (noting DuFaux col. 1, lines 10-63).

However, Applicant respectfully disagrees with the conclusory statement of the Examiner that these two references obviate the present invention. MPEP §2143.01(III) states that, "The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990)."

Claim 1 defines a device to remotely operate a *hearing device*. It comprises an input device with projection mechanism configured to project one or more virtual input elements and a sensor mechanism configured to register an operation of the virtual input elements. The invention resides in that a technique for controlling computer systems is used for controlling hearing aids.

The invention is made in the field of hearing aids. Therefore, one of ordinary skill in the art is an audiologist or a technician developing hearing aids who knows of new developments in the field of hearing devices. But this person is not an expert in the field of computing. Jakob deals with hearing devices and is thus is primarily classified in class 381, which relates to electrical audio signal processing systems and devices, and is also classified in class 455, which relates to telecommunications. DuFaux, which deals with a virtual data input device, is classified in class 345, which relates to computer graphics processing and selective visual display system.

In the present case the man skilled in the art of hearing aids has the problem to simplify the operation of hearing devices, in particular, for older hearing device users (see paragraph [0004] of the Specification). The man of ordinary skill in the art knows what is taught by Jakob, but there no teaching or suggestion in this document to look for possible solutions in the field of computer graphics processing and selective visual display system.

Consequently, a clear connection is missing between Jakob and DuFaux, and the inventor in this application clearly had to overcome this gap. An inventive step was necessary to arrive at human-machine-interfaces of computer

systems, being applied for hearing aids. Such combination of different techniques is not obvious for man skilled in the art of hearing aids knowing the document of Jacob.

2. The Examiner has not established a prima facie case for obviousness with respect to claims 4 and 13, or even with respect to more broadly worded claims 17 and18 respectively. A projection onto a hand or any part of the human body negates the necessity for the presence of an external surface upon which an interactable display is projected.

In the OA, on p. 3, the Examiner stated:

> Regarding claims 4 and 13, the combination of Jakob in view of DuFaux does not expressly teach the one or more virtual input elements are configured to be projected with the projection device onto a back of a hand. However, DuFaux teaches the virtual image may be projected downward on an angle onto virtually any surface (See Fig. 10 and col. 6, line 64 to col. 7, line 5) and Jakob teaches the device encompassed as a wristwatch (See Fig. 1 and col. 3, lines 14 and 15).

Applicant respectfully disagrees with the Examiner's characterization of the teaching of DuFaux. The relevant sections of DuFaux cited by the Examiner do not teach that a virtual image may be projected downward onto virtually any surface. These portions of DuFaux teach projecting onto a surface that essentially very flat an very smooth, and certainly external to the human body. It is noted that DuFaux does teach that the projection image does reach the surface of the backs of the fingers, as illustrated in Figures 10 and 11. However, the projections on the backs of the fingers are not "the virtual elements" that the sensor device registers an operation of—the virtual elements of DuFaux are

those that are projected onto an extremely flat surface. This is essential in DuFaux because it discloses the use of a large qwerty keyboard—one would never consider projecting such a keyboard onto the back surface of a hand (reference is further made to newly added claims 19 and 20). It is only in the context of the present invention that one would consider projecting a virtual input device onto a surface where a precise control over the height, angle, distance relationship, surface evenness, and/or environmental factors could not be obtained. Clearly the present invention advantageously teaches the useful projection onto a body surface that does not rely on the present of any external object and in a manner that is clearly not taught or suggested by the combination of Jakob and DuFaux.

35 U.S.C. §103(a), CLAIMS 5, 6, 14 AND 15 OBVIOUSNESS OVER JAKOB IN VIEW OF DUFAUX AND RAFII

3. Applicant relies on the arguments made above with respect to the independent claims.

In the OA, on pp. 4-5, the Examiner indicated that claims 5, 6, 14 and 15 are rejected under 35 U.S.C. §103(a) as being obvious in view of the combination of Jakob, DuFaux and Rafii. The Examiner added the Rafii as teaching elements of these four dependent claims, namely the scalability and freely programmable nature of the projected elements.

Without addressing these arguments on the merits, Applicant relies on the above arguments and asserts that Rafii fails to teach or suggest, alone or in combination with Jakob and DuFaux, all of the elements of the independent claims.

For these reasons, the Applicant asserts that the amended claim language clearly distinguishes over the prior art, and respectfully request that the Examiner withdraw the §103(a) rejection from the present application.

REQUEST FOR FULLY INITIALED PTO-1449 STATEMENT

4. Applicant respectfully requests that a fully initialed PTO-1449 form for the IDS submitted on May 19, 2004, be provided with the next Office Action.

At the end of the OA, the Examiner attached a partially initialed PTO-1449 form corresponding to the art submitted in an IDS on May 19, 2004, indicating that the art was partially considered on October 26, 2005.

The Examiner failed to initial reference AT, which is a foreign language article. For foreign language references to be considered, the Applicant must provide a concise statement of relevance or a translation. In the present case, a complete translation of the relevant portion of this foreign language reference was provided and therefore should have been properly the subject of consideration by the Examiner. Applicant therefore respectfully requests that a fully initialed PTO-1449 form be provided with the next Office Action or else the reasons for non-consideration of reference AT be provided.

CONCLUSION

Inasmuch as each of the objections have been overcome by the amendments, and all of the Examiner's suggestions and requirements have been satisfied, it is respectfully requested that the present application be reconsidered, the rejections be withdrawn and that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

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I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, PO Box 1450, Alexandria, VA 22313-1450 on February 1, 2006.

Mark Bergner